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September 17, 2020

Jocelyn Boyd
Chief Clerk and Administrator
South Carolina Public Service Commission
Synergy Business Park, The Saluda Building
101 Executive Center Drive
Columbia SC 29210

Re: South Carolina Energy Freedom Act (House Bill 3659) Proceeding Related to S.C. Code
Ann. Section 58-37-40 Integrated Resource Plans for Lockhart Power Company
Docket No. 2019-227-E

Dear Ms. Boyd:

Attached for filing on behalf of Lockhart Power Company ("LPC") please find the Direct
Testimony of Bryan D. Stone in the above referenced docket.

Thank you for your assistance in this matter.

Very truly yours,



Margaret M. Fox

MMF/khh

cc: Jeffrey M. Nelson (via Email jnelson@ors.sc.gov)
Andrew Bateman (via Email abateman@ors.sc.gov)

Attachment

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2019-227-E

IN RE:

South Carolina Energy Freedom Act)
(House Bill 3659) Proceeding Related)
To S.C. Code Ann. Section 58-37-40)
Integrated Resource Plans for Lockhart)
Power Company)
_____)

TESTIMONY OF BRYAN D. STONE

- 1 Q. Please state your name, business address, and occupation.
- 2 A. My name is Bryan D. Stone. I am President of Lockhart Power Company. My business
- 3 address is PO Box 10, 420 River Street, Lockhart, South Carolina 29364.
- 4 Q. Please describe your professional background.
- 5 A. I have been the head of Lockhart Power Company for 14 years. Prior to that, I worked
- 6 for 16 years in the heavy manufacturing industry, with responsibilities in engineering,
- 7 maintenance, and power management for very large retail industrial load customers and
- 8 renewable energy generators.
- 9 Q. Would you please provide a brief overview of your testimony?
- 10 A. Yes. First, I will provide a general description of Lockhart, including several key
- 11 characteristics relevant to its Integrated Resource Plan (“IRP”) that make it unique among
- 12 South Carolina’s investor owned utilities, and which are necessary to properly understand
- 13 and evaluate Lockhart’s IRP. With this backdrop, my testimony will then describe how
- 14 Lockhart’s IRP meets the applicable statutory requirements for the necessary

1 components of an IRP. Finally, I will discuss the specific IRP factors the Commission
2 is directed by statute to consider, and how Lockhart's IRP appropriately balances those
3 factors.

4 Q. Please describe Lockhart Power Company ("Lockhart").

5 A. Lockhart has approximately 6,160 retail customers: approximately 4,900 residential,
6 1,250 commercial customers, and 8 industrial customers. Lockhart serves rural portions
7 of five counties in the Upstate. It has a 34 kV sub-transmission system, a distribution
8 system, and generation resources. The generation resources are sufficient to provide
9 power to serve a minority of Lockhart's load. The power needed to serve Lockhart's
10 remaining load is purchased under a full requirements, long-term power purchase
11 agreement ("PPA") with Duke Energy Carolinas, LLC ("Duke"). My understanding is
12 that some form of similar power supply agreement between Lockhart and Duke has been
13 in place for more than 75 years, so for long-term planning purposes, we assume that a
14 similar agreement will continue to be in place, absent a better specific long-term
15 opportunity for Lockhart to provide its supply needs. Lockhart has four physical
16 interconnections with Duke's 100 kV transmission system, and at each of these locations
17 power is transformed down to the 34 kV sub-transmission level that Lockhart utilizes.

18
19 Lockhart employs approximately 50 people, including personnel performing all of the
20 following functions: a) operations and maintenance of sub-transmission and distribution
21 systems; b) operations (24x7) and maintenance of all generation stations; c) accounting,
22 billing, and customer service; d) environmental, health, and safety; e) engineering; f)

1 information technology; g) economic development; h) community involvement; i)
2 regulatory affairs; and j) general management.

3 Q. According to the terms of the Duke PPA, does Lockhart have any requirements to provide
4 generation resources to serve its load, or to balance generation resources with demand
5 either in real time or longer term?

6 A. No.

7 Q. Why has Lockhart chosen the full requirements Duke PPA to provide power for its
8 customers?

9 A. There are a number of reasons, with some of the more significant as follows. First,
10 Lockhart's load is relatively small with a peak of 70-80 megawatts ("MW"), which is
11 much too small for traditional utility scale generation resources such as nuclear, coal and
12 combined cycle natural gas power plants, and which is certainly not sufficient for a
13 diversified generation portfolio to serve base, intermediate and peak loads. Second,
14 Lockhart's customer base is relatively small – less than 1% the size of other South
15 Carolina investor owned utilities. The relatively small customer base and employee
16 headcount do not allow for the number and variety of personnel that are required for the
17 wide variety of system planning and operations functions associated with a traditional
18 utility generation portfolio, such as load balancing, resource planning, forecasting, fuel
19 procurement, legal, and production accounting, just to name a few. Third, the Duke PPA
20 ensures an extremely high level of reliability, since Lockhart has native load status, which
21 means Duke has the legal obligation to ensure Lockhart's customers receive the same
22 level of power supply reliability as Duke's own retail customers. Fourth, the Duke PPA
23 is a cost-based formula rate, which helps ensure that Lockhart's customers pay for costs

1 that Duke prudently incurs plus a reasonable rate of return. Fifth, there are provisions
2 that provide Lockhart the option to add certain amounts of renewable energy generation.
3 Overall, the Duke PPA has proven over many years to be an effective mechanism to
4 provide the benefits of a much larger diversified generation portfolio without many of
5 the costs.

6 Q. Did you prepare or cause to be prepared the Integrated Resource Plan (“IRP”) that was
7 filed with the Public Service Commission (“Commission”) on behalf of Lockhart Power
8 Company on or around June 17, 2020?

9 A. Yes.

10 Q. Did you also prepare or cause to be prepared Revised Attachment 1 to that IRP that was
11 filed with the Commission on or around July 20, 2020?

12 A. Yes.

13 Q. Does the IRP as revised meet the requirements of S.C. Code Ann. §58-37-40(B)?

14 A. Yes, I believe it does.

15 Q. Does the IRP satisfy the requirement to include a long-term forecast of the utility's sales
16 and peak demand under various reasonable scenarios?

17 A. Yes. Attachments 2 and 3 to Lockhart’s IRP show long-term forecasts of the utility’s
18 sales and peak demand under a reasonable scenario. In Lockhart’s case, Duke has the
19 contractual responsibility to provide the amount of generation in real time necessary to
20 meet Lockhart’s load, regardless of the size of that load. If the demand and energy
21 forecasts in Attachments 2 and 3 are arbitrarily increased or decreased by a given amount,
22 the only change to those forecasts would be that the amount of demand or energy supplied
23 by Duke would change to make up the difference. Thus, whether peak demand or system

1 energy requirements are low, medium, or high, the analysis is the same and the supply
2 needs will be met.

3 Q. Does the IRP satisfy the requirement to include the type of generation technology
4 proposed for a generation facility contained in the plan and the proposed capacity of the
5 generation facility, including fuel cost sensitivities under various reasonable scenarios?

6 A. Yes. Lockhart is not proposing to add generation facilities to its retail operations at this
7 time.

8 Q. Does the IRP satisfy the requirement to include projected energy purchased or produced
9 by the utility from a renewable energy resource?

10 A. Yes. The first seven facilities listed in the Revised Attachment 1 show all existing
11 generation resources currently in Lockhart's rate base, including five that produce energy
12 from renewable energy resources. Lockhart does not plan on adding purchased or
13 produced energy for its retail operations from renewable resources at this time. It is
14 worth noting that this requirement is presumably intended to encourage the development
15 of renewable energy resources. This encouragement is unnecessary in Lockhart's case
16 since more than 99% of the energy Lockhart generates from its own resources is
17 renewable energy.

18 Q. Does the IRP satisfy the requirement to include a summary of the electrical transmission
19 investments planned by the utility?

20 A. Yes. For clarification, Lockhart does not generally own or therefore invest in electrical
21 transmission, since its highest system voltage is at a sub-transmission (34 kV) level.
22 However, it does own a limited number of assets located within some of the four Duke
23 delivery substations that are at 100 kV, and which are involved in transforming power

1 down to the 34 kV voltage level. Attachment 5 lists three maintenance replacement
2 projects planned in the near-term related to the 34 kV system, in order to be responsive
3 to this IRP requirement; however, we have no major investments in our 34 kV sub-
4 transmission system planned for the purposes of integrating new generation resources,
5 which I believe is the likely intent of this IRP requirement.

6 Q. Does the IRP satisfy the requirement to include several resource portfolios developed
7 with the purpose of fairly evaluating the range of demand-side, supply-side, storage, and
8 other technologies and services available to meet the utility's service obligations,
9 including an evaluation of low, medium, and high cases for the adoption of renewable
10 energy and cogeneration, energy efficiency, and demand response measures?

11 A. Yes. Lockhart's current resource portfolio essentially consists of its long-term all-
12 requirements PPA with Duke Energy, plus Lockhart's renewable energy generation
13 portfolio. Through its PPA with Duke, Lockhart purchases a "slice" of Duke's
14 diversified resource portfolio to serve the majority of Lockhart's load, with all of the
15 associated supply-side inherent characteristics. Duke Energy's generation resources,
16 including at least several resource portfolios, will be examined in detail in Duke Energy's
17 separate IRP proceeding. The remainder of Lockhart's portfolio consists of energy
18 Lockhart generates from its own resources. As shown on Revised Attachment 1 and
19 Attachment 4 to the IRP, more than 99% of the energy Lockhart generates from its own
20 resources is renewable energy. I consider that we have therefore already achieved a "high
21 case" for the adoption of renewable energy as described above, although we continue to
22 attempt to identify additional cost-effective measures we can pursue under the terms of
23 the Duke PPA.

1 Q. Does Lockhart's IRP address customer energy efficiency and demand response
2 programs?

3 A. Yes. *See* IRP Section 4 (pp. 2-3).

4 Q. Does Lockhart's IRP address facility retirement assumptions?

5 A. Lockhart has no plans at this time to retire facilities.

6 Q. Does Lockhart's IRP address sensitivity analyses related to fuel costs, environmental
7 regulations, and other uncertainties or risks?

8 A. Yes, to the extent applicable. Again, this requirement is presumably intended to
9 encourage the development of renewable energy resources, in order to reduce risks
10 associated with fuel costs, environmental regulations, etc. Lockhart's self-generation is
11 more than 99% renewable, and fuel cost risk is therefore negligible, negating the purpose
12 for an associated sensitivity analysis. In general, the uncertainties associated with
13 environmental regulations and other such factors are dramatically lower with renewable
14 generation. Regarding Lockhart's non-renewable energy generation, Lockhart uses its
15 diesel generation only in case of system grid emergency, and the amount of such
16 generation and associated fuel cost is immaterial. *See* Attachment 4. To the extent
17 Lockhart might experience sensitivity related to fuel costs, environmental regulations,
18 and other uncertainties or risks, it would be reflected in the rates charged to Lockhart by
19 Duke Energy under the PPA. The analysis of those uncertainties or risks would be the
20 subject of Duke's Energy's separate IRP proceeding. It is noteworthy that Lockhart's
21 generation resources reduce the amount of power purchased from Duke, which serves to
22 moderate the impact of any Duke Energy fuel cost increases on Lockhart's customers.

1 Q. Does the IRP satisfy the requirement to include data regarding the utility's current
2 generation portfolio, including the age, licensing status, and remaining estimated life of
3 operation for each facility in the portfolio?

4 A. Yes. That data is shown on Revised Attachment 1 to the IRP.

5 Q. Does the IRP satisfy the requirement to include plans for meeting current and future
6 capacity needs with the cost estimates for all proposed resource portfolios in the plan?

7 A. Yes. *See* IRP Section 3 (pp. 1-2); Revised Attachment 1; Attachment 4. There is only
8 one resource portfolio being proposed and included in the IRP: the current actual
9 portfolio. Current and future capacity needs will be met by Lockhart's own existing
10 generation and by Duke Energy through the existing PPA. Therefore, there are no
11 additional costs associated with proposed resource portfolio additions. Lockhart will
12 continue to look for cost effective renewable energy opportunities under the terms of the
13 PPA, as it has successfully done in the past, and include those in future iterations of the
14 IRP as appropriate.

15 Q. Does the IRP satisfy the requirement to include an analysis of the cost and reliability
16 impacts of all reasonable options available to meet projected energy and capacity needs?

17 A. Yes. *See* IRP Section 3 (pp. 1-2); Revised Attachment 1; Attachment 4. Current and
18 future capacity needs will continue to be met by Duke Energy through the PPA through
19 2028, as contractually required. The PPA includes language that automatically extends
20 the term by an additional ten years, which is feasible given the formula rate that
21 automatically adjusts annually based on Duke's actual costs. If either party decides to
22 terminate the PPA, notice must be filed at least two years in advance. However, my
23 understanding is that Lockhart has had some form of power purchase agreement with

1 Duke for at least 75 years. Having said this, several years before the expiration of the
2 current PPA term in 2028, Lockhart will investigate whether there are better options
3 available for obtaining wholesale power on a full requirements basis. In addition as
4 specific potential renewable energy resources are identified and determined to be feasible
5 in the future, an analysis of the cost and reliability impacts will be performed at that time.

6 Q. Does the IRP satisfy the requirement to include a forecast of the utility's peak demand,
7 details regarding the amount of peak demand reduction the utility expects to achieve, and
8 the actions the utility proposes to take in order to achieve that peak demand reduction?

9 A. Yes. Attachment 2 to the IRP contains a forecast of LPC's peak demand. LPC does not
10 expect a significant reduction in demand, and its long-term, all-requirements PPA with
11 Duke Energy will ensure LPC is able to meet any realistic peak demand. While LPC
12 does not expect a significant reduction in demand, LPC is taking appropriate actions to
13 encourage improved load factors and promote efficient energy choices. Those actions
14 are detailed in IRP Section 4 (pp. 2-3).

15 Q. What is the statutory requirement for approval of a utility's IRP?

16 A. S.C. Code Ann. §58-37-40(C)(2) provides that the Commission shall approve a utility's
17 IRP if it "determines that the proposed [IRP] represents the most reasonable and prudent
18 means of meeting the electrical utility's energy and capacity needs as of the time the plan
19 is reviewed."

20 Q. Does Lockhart's IRP meet this standard?

21 A. I believe it does. Lockhart's PPA with Duke is the most reasonable and prudent means
22 of meeting the majority of its energy and capacity needs. Lockhart evaluates the Duke
23 PPA when it comes up for renewal to ensure that remains the case. In addition, the Duke

1 PPA provides Lockhart the option to add certain amounts of renewable energy
2 generation. The Duke PPA has proven over many years to be an effective mechanism to
3 provide the benefits to Lockhart's customers of a much larger diversified generation
4 portfolio without many of the costs.

5 Q. What factors should the Commission consider in making this determination?

6 According to S.C. Code Ann. § 58-37-40(C)(2), the Commission, in its discretion, must
7 consider whether the IRP appropriately balances the following factors:

- 8 (a) Resource adequacy and capacity to serve anticipated peak electrical load, and
9 applicable planning reserve margins;
- 10 (b) Consumer affordability and least cost;
- 11 (c) Compliance with applicable state and federal environmental regulations;
- 12 (d) Power supply reliability;
- 13 (e) Commodity price risks;
- 14 (f) Diversity of generation supply; and
- 15 (g) Other foreseeable conditions that the Commission determines to be for the
16 public interest.

17 Q. Do you believe that Lockhart's IRP strikes that appropriate balance?

18 A. Yes. Lockhart's IRP is essentially a continuation of its long-term approach to meeting
19 its customers' resource needs. As described in detail herein, via the Duke PPA Lockhart
20 and its customers are able to achieve several key economies of scale that would otherwise
21 not be possible given Lockhart's relatively small size. Resource adequacy and capacity
22 to serve anticipated peak electrical load, and applicable planning reserve margins are
23 ensured as part of the contract, regardless of changes in Lockhart's load or its own

1 generation output. Rates are reasonable and cost-based, both in terms of Duke's costs
2 under the PPA and Lockhart's costs for its own generation resources, and both Duke and
3 Lockhart must obtain state regulatory commission approval before adding generation
4 resources. Lockhart ensures customer affordability and least cost by evaluating the Duke
5 PPA periodically to ensure it remains the least cost wholesale option available to meet
6 its customers' needs, and by exploring other opportunities within the Duke PPA
7 framework to add generation. Lockhart's approach toward adding cost effective
8 generation as specific opportunities are identified has allowed it to grow from one facility
9 to seven in its retail operations during the six years ending in early 2013, with virtually
10 all generation from renewable resources.

11
12 Lockhart's renewable portfolio is compliant with applicable state and federal
13 environmental regulations. Power supply reliability, a key concern of Lockhart's, is
14 guaranteed by the PPA to be the same as Duke provides for its own direct retail
15 customers. Commodity price risk is almost non-existent for Lockhart's own generation,
16 another benefit of its renewable nature, and is reasonable under the Duke PPA due to
17 their diverse generation portfolio. Finally, in regards to the last factor of "other
18 foreseeable conditions determined by the commission to be for the public interest,"
19 Lockhart's generation portfolio is noteworthy not only because of what it is, *i.e.*
20 renewable, but because of what it is not. Its generation portfolio has no nuclear waste
21 health and environmental risk or future disposal cost, nor does it have coal ash
22 environmental risk or future disposal cost, or any other material fossil fuel emissions
23 environmental risk. It is certainly foreseeable that public concern about global climate

1 change could result in either some form of carbon tax or other penalty, which should not
2 negatively impact Lockhart's portfolio.

3
4 Overall, Lockhart believes that it is fair to say Lockhart's continuation of its long-term
5 approach as described in its IRP appropriately balances all of these factors, and therefore
6 represents the most reasonable and prudent means of meeting energy and capacity needs.

7 Q. What are you requesting the Commission to do in this proceeding?

8 A. I respectfully request that, for the reasons stated herein, the Commission find that
9 Lockhart's IRP appropriately balances the factors set forth in S.C. Code Ann. §58-37-
10 40(C)(2), and that the Commission approve Lockhart's IRP because it represents the
11 most reasonable and prudent means of meeting Lockhart's energy and capacity needs at
12 this time.

13 Q. Does that conclude your testimony?

14 A. Yes.
15
16